

REMARKS

Claims 1-10 are pending. Claims 1-8 stand rejected. Claim 1 is an independent claim.

Claim 1 stand rejected under 35 U.S.C. ' 102(a) as allegedly anticipated by Hotta *et al.* (JP 2002319726A).

Applicant wishes to thank the Examiner for indicating that dependent claims 9 and 10 are allowable if they are rewritten in independent forms and include all features of the base and any intervening claims. Applicant, however, wishes to defer amending these claims as suggested by the Examiner as applicant believes claim 1, as amended, cite features not anticipated by Hotta *et al.*

In particular, claim 1 has been amended to recite, *inter alia*, “a second amplifying section configured to be pumped by the attenuated **backward** spontaneous emission to secondarily amplify the amplified second wavelength band optical signals.”

As noted in the specification, the first amplifying section generates an amplified spontaneous emission (“ASE”) that travel in the opposite direction to that of C-band and L-band optical signals (Page 7, line 5-6). It is noted in the specification that such a backward ASE pumps the second amplifying optical fiber and secondarily amplifies the L-band optical signals (Page 9, line 7-9).

Hotta, as read by applicant, teaches an optical amplifier with two optical fiber amplifiers. Hotta discloses generation of ASE at the first erbium doped amplifying optical fiber as C-band and L-band optical signals are amplified. Moreover, Hotta discloses a second amplifying optical fiber that secondarily amplifies the L-band optical signal. Specifically, Hotta discloses that the

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second amplifying optical fiber is pumped by 10% of amplified C-band optical signal that is transmitted from the first fiber grating (Abstract).

Hotta fails to teach or show pumping of the second amplification unit by the attenuated **backward** spontaneous emission, as recited in claim 1. As shown in Hotta's Figure 1, ASE transmitted to the second amplifying fiber consists only of the ASE that is traveling in the same direction as the C-band and L-band optical signals (See also abstract). Applicant respectfully submits that it is well known in the art that such an ASE is a **forward** ASE. Thus, Hotta's pumping of the second amplifying optical fiber is limited to the pumping by a **forward ASE**.

Therefore, applicant respectfully requests withdrawal of the rejection.


Other claims in this application are each dependent on the independent claims 1 and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

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Should the Examiner deem that there are any issues which may be best resolved by telephone, please contact Applicant's undersigned representative at the number listed below.

Respectfully submitted,

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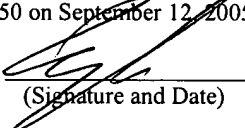
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